



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0507; Project Identifier 2018-SW-117-AD; Amendment 39-21712; AD 2021-18-11]

RIN 2120-AA64

Airworthiness Directives; Leonardo S.p.a. Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Leonardo S.p.a. Model AB139 and AW139 helicopters. This AD was prompted by a report that, during a post-flight inspection of an in-service helicopter, a tail rotor slider assembly was found fractured, and the bushing and the actuator rod in the tail rotor servo were partially damaged. This AD requires an inspection of the rail rotor tail rotor slider assembly for corrosion and signs of circumferential refinishing and, depending on the findings, replacement of the tail rotor slider assembly with a serviceable part or repetitive inspections of the tail rotor slider assembly for corrosion and signs of circumferential refinishing, as specified in a European Aviation Safety Agency (now European Union Aviation Safety Agency) (EASA) AD, which is incorporated by reference. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For material incorporated by reference (IBR) in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email ADs@easa.europa.eu; Internet www.easa.europa.eu. You may find this IBR material on the EASA website at <https://ad.easa.europa.eu>. You may view this material at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N 321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110. It is also available in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0507.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0507; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Andrea Jimenez, Aerospace Engineer, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 1600 Stewart Ave., Suite 410, Westbury, NY 11590; telephone (516) 228-7330; email andrea.jimenez@faa.gov. nyaco-cos@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2018-0292, dated December 28, 2018 (EASA AD 2018-0292) (also referred to as the MCAI), to correct an unsafe condition for Leonardo S.p.a. (formerly Finmeccanica S.p.A., AgustaWestland S.p.A., Agusta S.p.A.; AgustaWestland

Philadelphia Corporation, formerly Agusta Aerospace Corporation) Model AB139 and AW139 helicopters, all serial numbers. Although EASA AD 2018-0292 applies to all Model AB139 and AW139 helicopters, this AD applies to helicopters with an affected part installed instead.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Leonardo S.p.a. Model AB139 and AW139 helicopters. The NPRM published in the *Federal Register* on June 24, 2021 (86 FR 33149). The NPRM was prompted by a report that, during a post-flight inspection of an in-service helicopter, a tail rotor slide assembly was found fractured, and the bushing and the actuator rod in the tail rotor servo were partially damaged. The subsequent investigation revealed that the failure was due to fatigue, initiated from corroded areas (corrosion craters) on the surface of the tail rotor slider assembly characterized by signs of circumferential refinishing. The corrosion craters originated along finishing signs consistent with low grit sanding operations, which can remove the passivation corrosion protection from the tail rotor slider assembly. Sanding is a maintenance activity that is not included in the maintenance manual for Leonardo S.p.a. Model AB139 and AW139 helicopters and is not allowed on in-service helicopters. The NPRM proposed to require an inspection of the rail rotor tail rotor slider assembly for corrosion and signs of circumferential refinishing and, depending on the findings, replacement of the tail rotor slider assembly with a serviceable part or repetitive inspections of the tail rotor slider assembly for corrosion and signs of circumferential refinishing, as specified in EASA AD 2018-0292.

The FAA is issuing this AD to address corrosion in the tail rotor slider assembly caused by improper refinishing (characterized by signs of circumferential refinishing consistent with sanding). The unsafe condition, if not addressed, could result in fatigue crack and fracture of the tail rotor slider assembly, resulting in failure of the tail rotor

controls and consequent loss of yaw control of the helicopter. See EASA AD 2018-0292 for additional background information.

Discussion of Final Airworthiness Directive

Comments

The FAA gave the public the opportunity to participate in developing this final rule. The FAA received no comments on the NPRM or on the determination of the cost to the public.

Conclusion

The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Except for minor editorial changes, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products.

Related Service Information Under 1 CFR Part 51

EASA AD 2018-0292 requires a detailed inspection of the tail rotor slide assembly for corrosion and sign of circumferential refinishing and, depending on the findings, applicable corrective actions. If there is any evidence of corrosion craters the corrective action is replacement of the affected part with a serviceable part. If there is any evidence of surface imperfections caused by circumferential refinishing but no evidence of corrosion, the corrective action is repetitive inspections of the tail rotor slide assembly for corrosion and signs of circumferential refinishing. Replacement of an affected part with a serviceable part is terminating action for the repetitive inspections.

This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

The FAA estimates that this AD affects 129 helicopters of U.S. Registry. The FAA estimates the following costs to comply with this AD.

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$10,965

The FAA estimates the following costs to do any necessary replacement that would be required based on the results of the inspection. The agency has no way of determining the number of aircraft that might need this replacement:

On-condition costs

Action	Labor cost	Parts cost	Cost per product
Replacement	Up to 10 work-hours X \$85 per hour = \$850	\$23,200	Up to \$24,050
Inspection	1 work-hour X \$85 per hour = \$85 per inspection cycle	\$0	\$85 per inspection cycle

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds

necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2021-18-11 Leonardo S.p.a.: Amendment 39-21712; Docket No. FAA-2021-0507;

Project Identifier 2018-SW-117-AD.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Leonardo S.p.a. Model AB139 and AW139 helicopters, certificated in any category, with an affected part as identified in European Aviation Safety Agency (now European Union Aviation Safety Agency) (EASA) AD 2018-0292, dated December 28, 2018 (EASA AD 2018-0292).

(d) Subject

Joint Aircraft Service Component (JASC) Code: 6400, Tail Rotor System.

(e) Unsafe Condition

This AD was prompted by a report that, during a post-flight inspection of an in-service helicopter, a tail rotor slider assembly was found fractured, and the bushing and the actuator rod in the tail rotor servo were partially damaged. The FAA is issuing this AD to address corrosion in the tail rotor slider assembly caused by improper refinishing (characterized by signs of circumferential refinishing consistent with sanding). The unsafe condition, if not addressed, could result in fatigue cracks and fracture of the tail rotor slider assembly, resulting in failure of the tail rotor controls and consequent loss of yaw control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Requirements

Except as specified in paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, EASA AD 2018-0292.

(h) Exceptions to EASA AD 2018-0292

(1) Where EASA AD 2018-0292 refers to flight hours (FH), this AD requires using hours time-in-service.

(2) Where EASA AD 2018-0292 refers to its effective date, this AD requires using the effective date of this AD.

(3) Where EASA AD 2018-0292 refers to “Part I of the ASB,” this AD requires using “Part I of section 3., Accomplishment Instructions of the ASB,” and where EASA AD 2018-0292 refers to “Part II of the ASB,” this AD requires using “Part II of section 3., Accomplishment Instructions of the ASB.”.

(4) Where the service information referred to in EASA AD 2018-0292 specifies to return certain parts, this AD does not include that requirement.

(5) Where the service information referred to in EASA AD 2018-0292 specifies to contact Leonardo S.p.a. “if in doubt” regarding if a tail rotor slider assembly needs to be replaced based on evidence of corrosion craters, replacement of an affected slider assembly is required by this AD but contacting Leonardo S.p.a. is not required by this AD.

(6) The “Remarks” section of EASA AD 2018-0292 does not apply to this AD.

(i) No Reporting Requirement

Although the service information referenced in EASA AD 2018-0292 specifies to submit certain information to the manufacturer, this AD does not include that requirement.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person identified in paragraph (k) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(k) Related Information

For more information about this AD, contact Andrea Jimenez, Aerospace Engineer, COS Program Management Section, Operational Safety Branch, Compliance & Airworthiness Division, FAA, 1600 Stewart Ave., Suite 410, Westbury, NY 11590; telephone (516) 228-7330; email andrea.jimenez@faa.gov.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) European Aviation Safety Agency (EASA) AD 2018-0292, dated December 28, 2018.

(ii) [Reserved]

(3) For EASA AD 2018-0292, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email ADs@easa.europa.eu; Internet www.easa.europa.eu. You may find this EASA AD on the EASA website at <https://ad.easa.europa.eu>.

(4) You may view this material at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N 321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110. This material may be found in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0507.

(5) You may view this material that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this

material at NARA, email fr.inspection@nara.gov, or go to:

<https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on August 26, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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